

~~Summary~~
ABSTRACT

Polycyclic pyrimidine-2,4(1H,3H)-diones with functionalized alkyl residues at the 1- , the 3- , or both position(s); methods for their synthesis, production, and pharmaceutical preparation. The invention concerns the synthesis of the above-described compounds, their chemical and structural characterization, and the analysis of their physiological/pharmacological activities *in vitro* and *in vivo*. These goals have been attained by the specification of routes of synthesis, methods for the production of the compounds, and the presentation of compound-specific characteristics. The substances encompassed by the present invention demonstrate pharmacologically significant collagenase/matrix metalloproteinase inhibitory activities. The specific example of 1-(3-mercaptoprop-1-yl)-3-methyl-chinazolin-2,4(1H,3H)-dione will be presented in detail.